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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/802,931

03/18/2004

Kenji Ueda

119094

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25944

7590

01/26/2006

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EXAMINER

PRESTON, ERIK D

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 01/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/802,931

Applicant(s)

UEDA ET AL.

Examiner

Erik D. Preston

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1 & 3-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Hiroyuki (JP 10-056760 supplied by applicant).

With respect to claim 1, Hiroyuki teaches an AC generator, comprising: A rotor (Fig. 1, #2); a stator (Fig. 1, #3) disposed in opposed relation to said rotor; a frame (Fig. 1, #7 & 8) for supporting said rotor and said stator; a rectifier (as seen in Fig. 2) fixedly secured to said frame and equipped with a radiating fin (Fig. 3, #52 & 53) which cools a rectifying element (Fig. 3, #54 & 55) and makes an electrical connection; and a cooling wind generating device (Fig. 1, #26) for sucking cooling wind through said rectifier into the rotor side, wherein said radiating fin includes a fixing portion (of the type as seen in Fig. 7A, #61) to which said rectifying element is fixedly secured and a sub-fin (Fig. 7A, #63) extending radially from said fixing portion, and said radiating fin has an opening portion (Fig. 7A, #59) surrounded by said fixing portion, said sub-fin, and an outer circumferential portion of said radiating fin.

With respect to claim 3, Hiroyuki teaches the generator of claim 1, wherein a cooling wind suction side end portion of said sub-fin further protrudes toward a cooling wind suction side with respect to a cooling wind suction side end portion (as seen in Fig. 7A).

With respect to claim 4, Hiroyuki teaches the generator of claim 3, wherein the sub-fin has a first wall surface disposed on an outer-diameter side around said rectifying element and a second wall surface disposed on an inner-diameter side to make an angle below 180 degrees with respect to said first wall surface (as seen in Fig. 7A).

With respect to claim 5, Hiroyuki teaches the generator of claim 1, wherein said radiating fin is made of aluminum (Paragraph 25) in a die-casting manner. The requirement that the fin be formed by die-casting is a method limitation and given little patentable weight in a product claim.

With respect to claim 6, Hiroyuki teaches the generator of claim 1, wherein a standing portion protruding toward a cooling wind suction side with respect to a cooling wind suction side end portion of said fixing portion is formed on an inner-circumferential end portion of said radiating fin (as seen in Figs. 3 & 7B).

With respect to claims 7 & 8, Hiroyuki teaches the generator of claim 1, wherein said radiating fin includes, as two types of radiating fins, a positive electrode side radiating fin, and a negative electrode side radiating fin, a lead portion of said rectifying element fixedly secured to one radiating fin confronts the other radiating fin side and a cooling wind suction side end surface position of the other cooling fin is set on the upstream side along a flow of the cooling wind with respect to a joint position of said lead portion (as seen in Fig. 3), and said sub-fin and said air passage are made in at least one radiating fin located on the upstream side along a flow of the cooling wind and a plurality of protruding portions are formed at a position on the other radiating fin corresponding to said opening portion, said radiating fins are disposed in piles.

With respect to claim 9, Hiroyuki teaches the generator of claim 8, wherein said plurality of protruding portions are formed radially around said rotary shaft of said rotor (as seen in Fig. 3).

With respect to claim 10, Hiroyuki teaches the generator of claim 1, wherein a thickness of said sub-fin corresponding to said rectifying element in an axial direction of said rectifying element is made irregular (as seen in Fig. 7B).

With respect to claim 11, Hiroyuki teaches the generator of claim 1, wherein an output terminal (as seen in Fig. 2) is provided at one end portion of said radiating fin along its circumferential direction, and said sub-fin corresponding to said rectifying element disposed on the other end side along the circumferential direction is made so that its thickness in an axial direction of said rectifying element is larger than a thickness (in the radial direction) of sub-fins corresponding to other rectifying elements (as seen in Fig. 7B).

With respect to claim 12, Hiroyuki teaches an AC generator comprising: A rotor (Fig. 1, #2); a stator (Fig. 1, #3) disposed in opposed relation to said rotor; a frame for supporting said rotor and said stator; a rectifier fixedly secured to said frame and equipped with a radiating fin which cools a rectifying element (Fig. 7A, #55) and makes an electrical connection; and a cooling wind (Fig. 3, W) generating device (Fig. 1, #26) for sucking cooling wind through said rectifier into the rotor side, wherein said radiating fin includes a fixing portion (Fig. 7A, #61) to which said rectifying element is fixedly secured and a first sub-fin (the fin to which the arrow for element 57 is pointing to, the outer circumferential periphery of which can be seen in Fig. 7B) extending radially from

Art Unit: 2834

said fixing portion and a second sub-fin (Fig. 7A, #63) made to divide an air passage surrounded by said fixing portion, said first sub-fin and an outer circumferential end portion of said radiating fin, and the first sub-fin traverses the air passage and the second sub-fin (as seen in Fig. 7A).

With respect to claim 13, Hiroyuki teaches the generator of claim 12, wherein at least one side surface forming said air passage (Fig. 7A, #59) is made to be inclined to reduce an opening area along a flow of the cooling wind to be sucked (as seen in Fig. 9B).

With respect to claim 14, Hiroyuki teaches the generator of claim 12, wherein said second sub-fin has an arc-like configuration formed concentrically with the axis of said rectifying element (as seen in Fig. 7A).

With respect to claim 15, Hiroyuki teaches the generator of claim 12, wherein said second sub-fin is located on a more outer diameter side with respect to said fixed position of said rectifying element around said rotary shaft of said rotor.

With respect to claim 16, Hiroyuki teaches the generator of claim 12, wherein a length of said second sub-fin along a direction of a rotary shaft of said rotor is set to be shorter than the length of said first sub-fin in the rotary shaft direction, and a cooling wind suction side end portion of said second sub-fin is located on a cooling wind generating device side with respect to a suction side end portion of said first sub-fin (as seen in Fig. 7B).

With respect to claim 17, Hiroyuki teaches the generator of claim 12, wherein said radiating fin includes, as two types of radiating fins, a positive electrode side

Art Unit: 2834

radiating fin and a negative electrode side radiating fin which are disposed in piles in a direction of a rotary shaft rotor, and at least said radiating fin disposed on the upstream side along a flow of the cooling wind has said first and second sub-fins (as seen in Fig. 3).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hiroyuki (JP 10-056760 supplied by applicant). Hiroyuki teaches the generator of claim 1, but it does not teach that a thickness of said fixing portion in a radial direction is smaller than a thickness of said sub-fin in an axial direction. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to make a thickness of said fixing portion in a radial direction is smaller than a thickness of said sub-fin in an axial direction (such as is seen in Larson (US 3198972)) since it has been held that a change in shape is not considered to be patentably distinct if it does not effect the utility of a device (In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966)).

Response to Arguments

Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 2834

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erik D. Preston whose telephone number is (571)272-8393. The examiner can normally be reached on Monday through Friday 8-5.

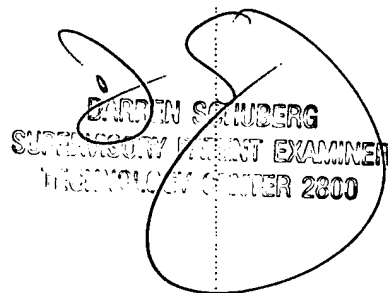
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571)272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2834

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



01/21/2006



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SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800